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## RFC Index Search Engine

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 RFC Contents Via: ☒ FTP ☐ HTTP

o Based on your search of **[socket]** in the *All Fields* field 18 matches were found  
 - Below you will find matching items **1 through 18**

Number	Title	Author or Ed.	Date	Format	More Info (Obs&Upd)	Status
<a href="#">RFC3678</a>	<b>Socket Interface Extensions for Multicast Source Filters</b>	D. Thaler, B. Fenner, B. Quinn	January 2004	ASCII		INFORMATIONAL
<a href="#">RFC3542</a>	<b>Advanced Sockets Application Program Interface (API) for IPv6</b>	W. Stevens, M. Thomas, E. Nordmark, T. Jinmei	May 2003	ASCII	Obsoletes <a href="#">RFC2292</a> <a href="#">Errata</a>	INFORMATIONAL
<a href="#">RFC3493</a>	<b>Basic Socket Interface Extensions for IPv6</b>	R. Gilligan, S. Thomson, J. Bound, J. McCann, W. Stevens	February 2003	ASCII	Obsoletes <a href="#">RFC2553</a>	INFORMATIONAL
<a href="#">RFC2553</a>	<b>Basic Socket Interface Extensions for IPv6</b>	R. Gilligan, S. Thomson, J. Bound, W. Stevens	March 1999	ASCII	Obsoletes <a href="#">RFC2133</a> , Obsoleted by <a href="#">RFC3493</a> , Updated by <a href="#">RFC3152</a>	INFORMATIONAL
<a href="#">RFC2292</a>	<b>Advanced Sockets API for IPv6</b>	W. Stevens, M. Thomas	February 1998	ASCII	Obsoleted by <a href="#">RFC3542</a>	INFORMATIONAL
<a href="#">RFC2133</a>	<b>Basic Socket</b>	R. Gilligan,	April	ASCII	Obsoleted by	INFORMATIONAL

	Interface Extensions for IPv6	S. Thomson, J. Bound, W. Stevens	1997		<a href="#">RFC2553</a>	
<a href="#">RFC0617</a>	<b>Note on socket number assignment</b>	E.A. Taft	Feb-19-1974	ASCII		UNKNOWN
<a href="#">RFC0503</a>	Socket number list	N. Neigus, J. Postel	Apr-12-1973	ASCII	Obsoletes <a href="#">RFC433</a> , Obsoleted by <a href="#">RFC739</a>	UNKNOWN
<a href="#">RFC0470</a>	<b>Change in socket for TIP news facility</b>	R. Thomas	Mar-13-1973	ASCII		UNKNOWN
<a href="#">RFC0433</a>	Socket number list	J. Postel	Dec-22-1972	ASCII	Obsoletes <a href="#">RFC349</a> , Obsoleted by <a href="#">RFC503</a>	UNKNOWN
<a href="#">RFC0398</a>	<b>ICP Sockets</b>	J.R. Pickens, E. Faeh	Sep-22-1972	ASCII		UNKNOWN
<a href="#">RFC0349</a>	Proposed Standard Socket Numbers	J. Postel	May-30-1972	ASCII	Obsoleted by <a href="#">RFC433</a>	UNKNOWN
<a href="#">RFC0322</a>	<b>Well known socket numbers</b>	V. Cerf, J. Postel	Mar-26-1972	ASCII		UNKNOWN
<a href="#">RFC0204</a>	<b>Sockets in use</b>	J. Postel	Aug-05-1971	ASCII	Updated by <a href="#">RFC234</a>	UNKNOWN
<a href="#">RFC0175</a>	<b>Comments on Socket Conventions Reconsidered</b>	E. Harslem, J.F. Heafner	Jun-11-1971	ASCII		UNKNOWN
<a href="#">RFC0167</a>	<b>Socket conventions reconsidered</b>	A.K. Bhushan, R.M. Metcalfe, J.M. Winett	May-24-1971	ASCII		UNKNOWN
<a href="#">RFC0147</a>	<b>Definition of a socket</b>	J.M. Winett	May-07-1971	ASCII	Updates <a href="#">RFC129</a>	UNKNOWN
<a href="#">RFC0129</a>	<b>Request for comments on socket name structure</b>	E. Harslem, J. Heafner, E. Meyer	Apr-22-1971	ASCII	Updated by <a href="#">RFC147</a>	UNKNOWN

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 RFC Contents Via: ☒ FTP ☐ HTTP

o Based on your search of **[virtual]** in the *All Fields* field 24 matches were found

- Below you will find matching items **1 through 24**

Number	Title	Author or Ed.	Date	Format	More Info (Obs&Upd)	Status
<a href="#">RFC3809</a>	Generic Requirements for Provider Provisioned Virtual Private Networks (PPVPN)	A. Nagarajan, Ed.	June 2004	ASCII		INFORMATIONAL
<a href="#">RFC3768</a>	Virtual Router Redundancy Protocol (VRRP)	R. Hinden, Ed.	April 2004	ASCII	Obsoletes <a href="#">RFC2338</a>	DRAFT STANDARD
<a href="#">RFC3715</a>	IPsec-Network Address Translation (NAT) Compatibility Requirements	B. Aboba, W. Dixon	March 2004	ASCII	<a href="#">Errata</a>	INFORMATIONAL
<a href="#">RFC3541</a>	A Uniform Resource Name (URN) Namespace for the Web3D Consortium (Web3D)	A. Walsh	May 2003	ASCII		INFORMATIONAL
<a href="#">RFC3321</a>	Signaling Compression (SigComp) - Extended Operations	H. Hannu, J. Christoffersson, S. Forsgren, K.-C. Leung, Z. Liu, R. Price	January 2003	ASCII		PROPOSED STANDARD
<a href="#">RFC3320</a>	Signaling Compression (SigComp)	R. Price, C. Bormann, J. Christoffersson,	January 2003	ASCII		PROPOSED STANDARD

		H. Hannu, Z. Liu, J. Rosenberg				
RFC3255	<b>Extending Point-to-Point Protocol (PPP) over Synchronous Optical NETwork/Synchronous Digital Hierarchy (SONET/SDH) with virtual concatenation, high order and low order payloads</b>	N. Jones, C. Murton	April 2002	ASCII		PROPOSED STANDARD
RFC3070	<b>Layer Two Tunneling Protocol (L2TP) over Frame Relay</b>	V. Rawat, R. Tio, S. Nanji, R. Verma	February 2001	ASCII		PROPOSED STANDARD
RFC3069	<b>VLAN Aggregation for Efficient IP Address Allocation</b>	D. McPherson, B. Dykes	February 2001	ASCII		INFORMATION
RFC2955	<b>Definitions of Managed Objects for Monitoring and Controlling the Frame Relay/ATM PVC Service Interworking Function</b>	K. Rehbehn, O. Nicklass, G. Mouradian	October 2000	ASCII		PROPOSED STANDARD
RFC2917	<b>A Core MPLS IP VPN Architecture</b>	K. Muthukrishnan, A. Malis	September 2000	ASCII		INFORMATION
RFC2787	<b>Definitions of Managed Objects for the Virtual Router Redundancy Protocol</b>	B. Jewell, D. Chuang	March 2000	ASCII		PROPOSED STANDARD
RFC2764	<b>A Framework for IP Based Virtual Private Networks</b>	B. Gleeson, A. Lin, J. Heinanen, G. Armitage, A. Malis	February 2000	ASCII	<a href="#">Errata</a>	INFORMATION
RFC2735	<b>NHRP Support for Virtual Private Networks</b>	B. Fox, B. Petri	December 1999	ASCII		PROPOSED STANDARD
RFC2685	<b>Virtual Private Networks Identifier</b>	B. Fox, B. Gleeson	September 1999	ASCII		PROPOSED STANDARD
RFC2674	<b>Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions</b>	E. Bell, A. Smith, P. Langille, A. Rijhsinghani, K. McCloghrie	August 1999	ASCII		PROPOSED STANDARD

<a href="#">RFC2642</a>	<b>Cabletron's VLS Protocol Specification</b>	L. Kane	August 1999	ASCII		INFORMATION
<a href="#">RFC2547</a>	<b>BGP/MPLS VPNs</b>	E. Rosen, Y. Rekhter	March 1999	ASCII		INFORMATION
<a href="#">RFC2340</a>	<b>Nortel's Virtual Network Switching (VNS) Overview</b>	B. Jamoussi, D. Jamieson, D. Williston, S. Gabe	May 1998	ASCII		INFORMATION
<a href="#">RFC2338</a>	<b>Virtual Router Redundancy Protocol</b>	S. Knight, D. Weaver, D. Whipple, R. Hinden, D. Mitzel, P. Hunt, P. Higginson, M. Shand, A. Lindem	April 1998	ASCII	Obsoleted by <a href="#">RFC3768</a>	PROPOSED STANDARD
<a href="#">RFC1705</a>	<b>Six Virtual Inches to the Left: The Problem with IPng</b>	R. Carlson, D. Ficarella	October 1994	ASCII		INFORMATION
<a href="#">RFC0824</a>	<b>CRONUS Virtual Local Network</b>	W.I. MacGregor, D.C. Tappan	Aug-25-1982	ASCII		UNKNOWN
<a href="#">RFC0782</a>	<b>Virtual Terminal management model</b>	J. Nablisky, A.P. Skelton	Jan-01-1981	ASCII		UNKNOWN
<a href="#">RFC0377</a>	<b>Using TSO via ARPA Network Virtual Terminal</b>	R.T. Braden	Aug-10-1972	ASCII		UNKNOWN

# The main IP address is incorrectly identified as the source of packets that you send through a socket that is bound to a virtual IP address in Windows 2000

## SYMPTOMS

When you send packets from a Microsoft Windows 2000-based computer that has a network card with one main IP address and one virtual IP address through a socket that is bound to the virtual IP address, the main IP address may be unexpectedly identified as the source of the packets. You expect the virtual IP address to be identified as the source of the packets. This problem occurs only if you send the packets to a multicast address.

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Last Review : September 29, 2004  
Revision : 1.0

For example, this problem occurs in the following scenario:

1. You assign the IP address 150.41.50.56 as the main address for the network card.
2. You assign the IP address 120.50.10.10 as an additional, or *virtual*, address for the network card.
3. You bind socket 12345 to IP address 120.50.10.10.
4. You send packets through socket 12345 to a multicast address.

The source address of the packets that you sent through socket 12345 to the multicast address is IP 150.41.50.56 instead of IP 120.50.10.10.

## CAUSE

This problem occurs because the `IP_MULTICAST_IF` socket option does not obtain the virtual IP address, and therefore it marks the source of the packets as the main IP address.

## RESOLUTION

### Hotfix information

A supported hotfix is now available from Microsoft, but it is only intended to correct the problem that is described in this article. Only apply it to systems that are experiencing this specific problem. This hotfix may receive additional testing. Therefore, if you are not severely affected by this problem, we recommend that you wait for the next Windows 2000 service pack that contains this hotfix.

To resolve this problem immediately, contact Microsoft Product Support Services to obtain the hotfix. For a complete list of Microsoft Product Support Services phone numbers and information about support costs, visit the following Microsoft Web site:

[http://support.microsoft.com/default.aspx?scid=fh;\[LN\];CNTACTMS](http://support.microsoft.com/default.aspx?scid=fh;[LN];CNTACTMS)

**Note** In special cases, charges that are ordinarily incurred for support calls may be canceled if a Microsoft Support Professional determines that a specific update will resolve your problem. The usual support costs will apply to additional support questions and issues that do not qualify for the specific update in question.

### Prerequisites

Windows 2000 Server Service Pack 4 (SP4).

### Restart requirement

You must restart your computer after you apply this hotfix.

### Hotfix replacement information

This hotfix does not replace any other hotfixes.

### File information

The English version of this hotfix has the file attributes (or later file attributes) that are listed in the following table. The dates and times for these files are listed in coordinated universal time (UTC). When you view the file information, it is converted to local time. To find the difference between UTC and local time, use the **Time Zone** tab in the Date and Time tool in Control Panel.

Date	Time	Version	Size	File name
19-Jun-2003	20:05	5.0.2195.6687	120,240	Afd.sys
19-Jun-2003	20:05	5.0.2195.6602	108,816	Msafd.dll
20-Aug-2004	08:06	5.0.2195.6969	318,832	Tcpip.sys
19-Jun-2003	20:05	5.0.2195.6655	16,240	Tdi.sys
19-Jun-2003	20:05	5.0.2195.6601	17,680	Wshtcpip.dll

## STATUS

Microsoft has confirmed that this is a problem in the Microsoft products that are listed in the "Applies to" section.

## MORE INFORMATION

The IP\_MULTICAST\_IF socket option determines the interface to be used for multicasting. For additional information about how hotfix packages are named, click the following article number to view the article in the Microsoft Knowledge Base:

[816915](#) New file naming schema for Microsoft Windows software update packages

For additional information, click the following article number to view the article in the Microsoft Knowledge Base:

[824684](#) Description of the standard terminology that is used to describe Microsoft software updates

## APPLIES TO

- Microsoft Windows 2000 Enterprise Edition
- Microsoft Windows 2000 Professional Edition
- Microsoft Windows 2000 Enterprise Edition

**Keywords:** kbbug kbfix kbqfe kbwin2000presp5fix KB883926

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L Number	Hits	Search Text	DB	Time stamp
1	36	socket\$1 near10 virtual with network	USPAT	2004/10/19 10:51
2	1	socket\$1 near10 virtual with domain\$1	USPAT	2004/10/19 10:45
3	6	socket\$1 near10 virtual with network and socket\$1 near15 (address\$1 or domain\$1) near15 virtual	USPAT	2004/10/19 10:47
4	7	socket\$1 near10 virtual with host\$1	USPAT	2004/10/19 10:51
5	43	socket\$1 near10 virtual with (host\$1 or client\$1 or user\$1)	USPAT	2004/10/19 10:55
6	100	socket\$1 near10 virtual with (host\$1 or client\$1 or user\$1)	USPAT; US-PGPUB	2004/10/19 10:58
7	6	socket\$1 near10 virtual near10 network near5 address\$2	USPAT; US-PGPUB	2004/10/19 10:57
8	74	socket\$1 near10 virtual near8 (host\$1 or client\$1 or user\$1)	USPAT; US-PGPUB	2004/10/19 10:59
9	3	socket\$1 near10 virtual near8 (host\$1 or client\$1 or user\$1)and source near address same virtual near address\$2	USPAT; US-PGPUB	2004/10/19 11:08
10	38	socket\$1 near10 virtual near8 address\$2	USPAT; US-PGPUB	2004/10/19 11:58
11	836	source near10 virtual near8 address\$2	USPAT; US-PGPUB	2004/10/19 11:58
12	652	source near3 address\$2 near10 virtual near8 address\$2	USPAT; US-PGPUB	2004/10/19 11:59
13	70	source near3 address\$2 near10 virtual near8 address\$2 AND socket\$3	USPAT; US-PGPUB	2004/10/19 11:59
14	62	source near3 address\$2 near10 virtual near8 address\$2 AND socket\$3 not (socket\$1 near10 virtual near8 address\$2)	USPAT; US-PGPUB	2004/10/19 12:00
15	4	source near3 address\$2 near10 virtual near8 address\$2 same socket\$3 not (socket\$1 near10 virtual near8 address\$2)	USPAT; US-PGPUB	2004/10/19 12:00
16	51	virtual near8 address\$2 same socket\$3 not (socket\$1 near10 virtual near8 address\$2)	USPAT; US-PGPUB	2004/10/19 12:01
17	4	virtual near8 address\$2 same socket\$3.ab. not (socket\$1 near10 virtual near8 address\$2)	USPAT; US-PGPUB	2004/10/19 13:46
18	5	socket\$1 near15 virtual near8 host\$1 and socket\$1 same virtual near5 address\$2	USPAT; US-PGPUB	2004/10/19 13:47
-	0	socket\$1 with bind\$3 near10 source	USPAT	2004/04/28 14:17
-	1	socket\$1 near10 bind\$3 near10 source	USPAT	2004/04/28 14:17
-	4880	socket\$1 near10 source	USPAT	2004/04/28 14:17
-	170	communicat\$3 with socket\$1 near10 source	USPAT	2004/04/28 14:17
-	0	communicat\$3 with socket\$1 near10 source near10 virtual.ab.	USPAT	2004/04/28 14:18
-	0	communicat\$3 with socket\$1 near10 source near10 virtual	USPAT	2004/04/28 14:18
-	0	communicat\$3 with socket\$1 near10 virtual with address\$2	USPAT	2004/04/28 14:18
-	34	communicat\$3 with socket\$1 near10 virtual	USPAT	2004/04/28 14:19
-	103	communicat\$3 with socket\$1 near10 address\$2	USPAT	2004/04/28 14:42
-	0	communicat\$3 with socket\$1 near10 address\$2 with virtual	USPAT	2004/04/28 14:19
-	17	communicat\$3 with socket\$1 near10 virtual with network	USPAT	2004/04/28 14:36
-	0	communicat\$3 with socket\$1 near10 address\$2 near10 securit\$3	USPAT	2004/04/28 14:21
-	1	communicat\$3 with socket\$1 near10 address\$2.ab.	USPAT	2004/04/28 14:21
-	21	709/20\$1.ccls. and communicat\$3 with socket\$1 near10 address\$2	USPAT	2004/04/28 14:23

-	0	709/20\$1.ccls. and socket\$1 near10 virtual with address\$2	USPAT	2004/04/28 14:23
-	6	709/20\$1.ccls. and socket\$1 near15 source near15 address\$2	USPAT	2004/04/28 14:23
-	5	709/20\$1.ccls. and socket\$1 near15 source near15 address\$2 not (709/20\$1.ccls. and communicat\$3 with socket\$1 near10 address\$2)	USPAT	2004/04/28 14:23
-	21	709/20\$1.ccls. and communicat\$3 with socket\$1 near10 address\$2 not (communicat\$3 with socket\$1 near10 virtual with address\$2 )	USPAT	2004/04/28 14:24
-	9	socket\$1 near10 virtual with address\$2	USPAT	2004/04/28 14:36
-	5	709/245.ccls. and communicat\$3 with socket\$1 near10 address\$2	USPAT	2004/04/28 14:39
-	19	709/245.ccls. and socket\$1 near10 address\$2	USPAT	2004/04/28 14:39
-	3	709/245.ccls. and socket\$1 near10 address\$2 and identit\$3	USPAT	2004/04/28 14:40
-	1	709/245.ccls. and socket\$1 near10 identit\$3	USPAT	2004/04/28 14:40
-	1	709/\$3.ccls. and communicat\$3 with socket\$1 near10 address\$2.ab.	USPAT	2004/04/28 14:42
-	45	709/\$3.ccls. and communicat\$3 with socket\$1 near10 address\$2	USPAT	2004/04/28 15:47
-	1	709/\$3.ccls. and communicat\$3 with socket\$1 near10 bind\$3 with address\$2	USPAT	2004/04/28 14:49
-	515	709/\$3.ccls. and socket\$1 near10 connection\$1	USPAT	2004/04/28 15:48
-	20	709/\$3.ccls. and socket\$1 near10 connection\$1.ab.	USPAT	2004/04/28 15:49
-	20	709/\$3.ccls. and socket\$1 near10 connection\$1.ab. and socket\$1	USPAT	2004/04/28 15:53
-	21	709/\$3.ccls. and socket\$1 near10 connection\$1 and spoofing	USPAT	2004/04/28 15:53
-	4	709/\$3.ccls. and socket\$1 near10 connection\$1 and spoofing.ab.	USPAT	2004/04/28 15:56
-	8	709/\$3.ccls. and socket\$1 near10 connection\$1 and ip with spoofing	USPAT	2004/04/28 16:06
-	0	709/\$3.ccls. and email with server near15 socket\$1 near10 connection\$1	USPAT	2004/04/28 16:06
-	258	709/\$3.ccls. and server near15 socket\$1 near10 connection\$1	USPAT	2004/04/28 16:11
-	7	709/\$3.ccls. and server near15 socket\$1 near10 connection\$1.ab.	USPAT	2004/04/28 16:12
-	0	709/\$3.ccls. and server near15 socket\$1 near10 connection\$1.ab. and source with address\$2	USPAT	2004/04/28 16:13
-	41	709/\$3.ccls. and server near15 socket\$1 near10 connection\$1 and source with address\$2	USPAT	2004/04/28 16:13
-	6	709/\$3.ccls. and server near15 socket\$1 near10 connection\$1 and source with address\$2 near10 socket\$1	USPAT	2004/04/28 16:15
-	1213	709/\$3.ccls. and bind\$3 source with address\$2 near10 socket\$1	USPAT	2004/04/28 16:15
-	1	709/\$3.ccls. and bind\$3 near15 source with address\$2 near10 socket\$1	USPAT	2004/04/28 16:16
-	42	709/\$3.ccls. and bind\$3 near15 address\$2 near10 socket\$1	USPAT	2004/04/28 16:17
-	0	709/\$3.ccls. and bind\$3 near15 address\$2 near10 socket\$1.ab.	USPAT	2004/04/28 16:16
-	7	709/\$3.ccls. and bind\$3 near15 address\$2 near10 socket\$1 and spoof\$3	USPAT	2004/04/28 16:17
-	35	709/\$3.ccls. and bind\$3 near15 address\$2 near10 socket\$1 not (709/\$3.ccls. and bind\$3 near15 address\$2 near10 socket\$1 and spoof\$3)	USPAT	2004/04/28 16:17
-	1	6567848.pn. and socket\$1	USPAT	2004/04/29 13:54

-	811	socket\$1 with host	USPAT	2004/04/29 13:54
-	2	socket\$1 with host.ti.	USPAT	2004/04/29 13:54
-	2	socket\$1 with host.ti. and socket\$1	USPAT	2004/04/29 13:57
-	0	socket\$1 with host.ti. and socket\$1 and remote	USPAT	2004/04/29 13:55
-	2	socket\$1 with host.ti. and socket\$1 and host	USPAT	2004/04/29 13:59
-	1	socket\$1 with host near10 remote.ab.	USPAT	2004/04/29 14:01
-	36	socket\$1 with host near2 server	USPAT	2004/04/29 14:01
-	1	socket\$1 with host near2 server.ab.	USPAT	2004/04/29 14:23
-	2	709/245.ccls. and socket\$1 with host near2 server	USPAT	2004/04/29 14:23
-	36	socket\$1 with host near2 server	USPAT	2004/04/29 14:24
-	27	socket\$1 with host near2 server and remote	USPAT	2004/04/29 14:24
-	9	socket\$1 with host near2 server and remote near3 client\$1	USPAT	2004/04/29 14:28
-	9	socket\$1 with host near2 server and remote near3 client\$1 and socket\$1	USPAT	2004/04/29 15:01
-	9	socket\$1 with host near2 server and remote near3 client\$1 and socket\$1 and socket with address\$2	USPAT	2004/04/29 15:02
-	9	socket\$1 with host near2 server and remote near3 client\$1 and socket\$1 and socket with client with address\$2	USPAT	2004/04/29 15:02
-	7	socket\$1 with host near2 server and remote near3 client\$1 and socket\$1 and socket with client near3 address\$2	USPAT	2004/04/29 15:19
-	0	socket\$1 with multiple with host near2 server and remote near3 client\$1 and socket\$1 and socket with client near3 address\$2	USPAT	2004/04/29 15:12
-	0	socket\$1 with client near3 address\$2.ti.	USPAT	2004/04/29 15:14
-	0	socket\$1 with address\$2.ti.	USPAT	2004/04/29 15:14
-	4	socket\$1 with client near3 address\$2.ab.	USPAT	2004/04/29 15:15
-	4	socket\$1 with client near3 address\$2.ab.and remote	USPAT	2004/04/29 15:15
-	1	5825890.pn. and socket\$1	USPAT	2004/04/29 15:24
-	1	5825890.pn. and socket\$1 and address\$2	USPAT	2004/04/29 15:27
-	30	host with behalf with client\$1	USPAT	2004/04/29 15:27
-	8	host with behalf with client\$1 and socket\$1	USPAT	2004/04/29 15:28
-	1	host with behalf with client\$1 and socket\$1 near15 address\$2	USPAT	2004/04/29 15:30
-	40	behalf with client\$1 and socket\$1 near15 address\$2	USPAT	2004/04/29 15:31
-	4	behalf with client\$1 and socket\$1 near15 address\$2 near15 remote	USPAT	2004/04/29 15:33
-	10	creat\$3 near6 socket\$1 near20 address\$2 with client	USPAT	2004/04/29 15:34
-	0	creat\$3 near6 socket\$1 near20 address\$2 with client.ab.	USPAT	2004/04/29 15:34
-	0	creat\$3 near6 socket\$1 near20 address\$2 with client.ti.	USPAT	2004/04/29 15:34
-	5	creat\$3 near6 socket\$1 near20 address\$2 with client and host	USPAT	2004/04/29 15:34
-	1	creat\$3 near6 socket\$1 near20 address\$2 with client and (host or server) with behalf near10 client\$1	USPAT	2004/04/29 15:35

-	10	creat\$3 near6 socket\$1 near20 address\$2 with client and (host or server)	USPAT	2004/04/29 15:37
-	4	creat\$3 near6 socket\$1 near20 address\$2 with client and (host or server)near10 remote near15 socket\$1	USPAT	2004/04/29 15:42
-	4	creat\$3 near6 socket\$1 near20 address\$2 with client and (host or server)near10 remote near15 socket\$1 and socket\$1 with address\$2	USPAT	2004/04/29 15:48
-	3	creat\$3 near6 socket\$1 near15 gateway	USPAT	2004/04/29 15:55
-	2	creat\$3 near6 socket\$1 near15 gateway and socket near15 address\$2	USPAT	2004/04/29 16:25
-	2	creat\$3 near6 socket\$1 near15 gateway and socket near15 address\$2 and socket\$1	USPAT	2004/04/29 19:47
-	1	6415329.pn. and multiple	USPAT	2004/04/29 21:38
-	1	6415329.pn. and domain\$1	USPAT	2004/04/29 21:55
-	1	6415329.pn. and (OS or (operating with system\$1))	USPAT	2004/04/29 22:14
-	0	6415329.pn. and accept	USPAT	2004/04/29 22:14
-	1	6415329.pn. and accept\$5	USPAT	2004/04/29 22:35
-	1	6415329.pn. and (queue\$1 or buffer\$1)	USPAT	2004/04/29 22:39
-	1	6415329.pn. and (queue\$1 or buffer\$1)	USPAT	2004/04/29 22:56
-	1	6119170.pn. and (queue\$1 or buffer\$1)	USPAT	2004/04/29 22:56
-	0	creat\$3 with socket\$1 near10 address\$2 near6 (host or server or gateway).ab.	USPAT	2004/04/30 11:13
-	15	creat\$3 with socket\$1 near10 address\$2 near6 (host or server or gateway)	USPAT	2004/04/30 11:19
-	15	creat\$3 with socket\$1 near10 address\$2 near6 (host or server or gateway)and socket	USPAT	2004/04/30 11:33
-	3	creat\$3 with socket\$1 near10 network.ab.	USPAT	2004/04/30 11:35
-	0	creat\$3 with socket\$1 near10 gateway.ab.	USPAT	2004/04/30 11:35
-	3	creat\$3 with socket\$1 near10 multi\$6 with host\$1	USPAT	2004/04/30 11:36
-	6	creat\$3 with socket\$1 near10 remote with host\$1	USPAT	2004/04/30 11:37
-	1	creat\$3 with socket\$1 near10 remote with host\$1 near10 (server or gateway)	USPAT	2004/04/30 11:37
-	1	creat\$3 with socket\$1 near10 behalf near10 (host\$1 or client\$1)	USPAT	2004/04/30 11:42
-	1	creat\$3 with socket\$1 near10 behalf near10 (host\$1 or client\$1) and socket	USPAT	2004/04/30 11:43
-	0	creat\$3 with socket\$1 near10 behalf near10 (*server or gateway)	USPAT	2004/04/30 11:43
-	1	creat\$3 with socket\$1 near10 behalf near10 (server or gateway)	USPAT	2004/04/30 11:44
-	1	6415329.pn.	USPAT	2004/04/30 11:44
-	21	("4491947"   "4677588"   "5159592"   "5224098"   "5423002"   "5442633"   "5537412"   "5572530"   "5623601"   "5640386"   "5673322"   "5852721"   "5883661"   "6092191"   "6101189"   "6115384"   "6157950"   "6198728"   "6215776"   "6249523"   "6259701").PN.	USPAT	2004/04/30 11:44
-	7	6415329.URPN.	USPAT	2004/04/30 11:44
-	0	6415329.URPN.and socket	USPAT	2004/04/30 11:44

-	2	("4491947"   "4677588"   "5159592"   "5224098"   "5423002"   "5442633"   "5537412"   "5572530"   "5623601"   "5640386"   "5673322"   "5852721"   "5883661"   "6092191"   "6101189"   "6115384"   "6157950"   "6198728"   "6215776"   "6249523"   "6259701").PN.and socket	USPAT	2004/04/30 11:45
-	1	("4491947"   "4677588"   "5159592"   "5224098"   "5423002"   "5442633"   "5537412"   "5572530"   "5623601"   "5640386"   "5673322"   "5852721"   "5883661"   "6092191"   "6101189"   "6115384"   "6157950"   "6198728"   "6215776"   "6249523"   "6259701").PN.and socket and address\$2	USPAT	2004/04/30 11:46
-	53	socket near10 (host or client) near10 remote with (host or client)	USPAT	2004/04/30 11:47
-	1	socket near10 (host or client) near10 remote with (host or client).ab.	USPAT	2004/04/30 11:48
-	83	(server or gateway)near10 manag\$7 near10 socket	USPAT	2004/04/30 11:48
-	3	(server or gateway)near10 manag\$7 near10 socket near10 remote	USPAT	2004/04/30 11:50
-	3	(server or gateway)near10 manag\$7 near10 socket near10 remote and socket	USPAT	2004/04/30 11:50
-	41	creat\$3 with socket\$1 near10 (connect\$3 or between) with (network\$1 or gateway\$1)	USPAT	2004/04/30 12:11
-	16	creat\$3 with socket\$1 near10 (connect\$3 or between) with (network\$1 or gateway\$1) and socket near15 address\$2	USPAT	2004/04/30 12:14
-	1	creat\$3 with socket\$1 near10 (connect\$3 or between) with (network\$1 or gateway\$1) and socket near15 address\$2 with gateway\$1	USPAT	2004/04/30 12:15
-	4	creat\$3 with socket\$1 near10 (connect\$3 or between) with (network\$1 or gateway\$1) and socket near15 address\$2 near10 (server or gateway\$1)	USPAT	2004/04/30 12:15
-	321047	creat\$3 with socket\$1 near10 first with remote and second remote	USPAT	2004/04/30 12:42
-	1	creat\$3 with socket\$1 near10 first with remote and second with remote and address\$2	USPAT	2004/04/30 12:42
-	2	creat\$3 with socket\$1 near10 first with remote and second with remote	USPAT	2004/04/30 12:44
-	5	creat\$3 with socket\$1 near10 first with remote	USPAT	2004/04/30 12:57
-	3	creat\$3 with socket\$1 near10 first with remote with (client or host or computer)	USPAT	2004/04/30 12:45
-	3	creat\$3 with socket\$1 near10 multi\$6 with remote	USPAT	2004/04/30 12:46
-	0	(server or gateway) near6 creat\$3 with socket\$1 near10 first with remote	USPAT	2004/04/30 12:58
-	9	(server or gateway) near6 creat\$3 with socket\$1 with remote	USPAT	2004/04/30 12:58
-	0	(server or gateway) near6 creat\$3 with socket\$1 with remote.ab.	USPAT	2004/04/30 12:58
-	9	(server or gateway) near6 creat\$3 with socket\$1 with remote and address	USPAT	2004/04/30 13:42
-	9	(server or gateway) near6 creat\$3 with socket\$1 with remote and address and socket	USPAT	2004/04/30 14:11
-	1	6425013.URPN.	USPAT	2004/04/30 13:49
-	48	socket\$1 with remote and source with address and socket	USPAT	2004/04/30 14:11
-	11	(gateway or server) with socket\$1 with remote and source with address and socket	USPAT	2004/04/30 15:05
-	1	(gateway or server) with source with address with socket and socket\$1 with remote	USPAT	2004/04/30 14:46

-	13	socket\$1 with remote and (gateway or server) with source with address and socket	USPAT	2004/04/30 15:05
-	13	socket\$1 with remote and (gateway or server) with source with address and socket not (creat\$3 with socket\$1 near10 first with remote and second with remote)	USPAT	2004/04/30 15:39
-	7	socket near10 source with address\$2 with (gateway or server)	USPAT	2004/04/30 15:50
-	63	socket near10 (gateway or server) with remote	USPAT	2004/04/30 15:50
-	1	socket near10 (gateway or server) with remote and source with address with (gateway or server)	USPAT	2004/04/30 16:29
-	1	6324582.pn. and domain	USPAT	2004/04/30 16:34
-	1	6324582.pn. and domain and (queue or buffer)	USPAT	2004/04/30 16:36
-	0	tempor\$6 with queue\$5 with email\$1	USPAT	2004/04/30 16:37
-	121784	tempor\$6 with queue\$5 with email\$1 or message\$1	USPAT	2004/04/30 16:37
-	243	tempor\$6 with queue\$5 with (email\$1 or message\$1)	USPAT	2004/04/30 16:37
-	243	tempor\$6 with queue\$5 with message\$1	USPAT	2004/04/30 16:37
-	0	tempor\$6 with queue\$5 with outgoing with message\$1.ab.	USPAT	2004/04/30 16:38
-	10	tempor\$6 with queue\$5 with outgoing with message\$1	USPAT	2004/04/30 16:39
-	206	unique with domain with name	USPAT	2004/04/30 16:40
-	4	unique with domain with name.ab.	USPAT	2004/04/30 16:48
-	1	6658454.pn. and domain	USPAT	2004/04/30 16:44
-	3	virtual near10 remote near10 host with domain with name	USPAT	2004/04/30 16:56
-	1	6119170.pn. and (os or operating)	USPAT	2004/04/30 16:57
-	1	6415329.pn. and (os or operating)	USPAT	2004/04/30 17:02
-	1	6415329.pn. and user\$1	USPAT	2004/04/30 17:05
-	3	remote with user\$1 with (creat\$3 or send\$3) near10 message near10 gateway	USPAT	2004/04/30 17:08
-	0	remote with user\$1 with access\$3 with computer	USPAT	2004/04/30 17:09
-	1106	remote with user\$1 with access\$3 with computer	USPAT	2004/04/30 17:09
-	4	remote with user\$1 with access\$3 with computer near15 creat\$3 with (message or email)	USPAT	2004/04/30 17:11
-	1	6415329.pn. and remote with access\$3	USPAT	2004/04/30 17:12
-	3645	user with remote with access\$3	USPAT	2004/04/30 17:15
-	7	add\$3 near10 received with email	USPAT	2004/04/30 17:17
-	0	add\$3 near10 received with email\$1 near10 (source or sender)	USPAT	2004/04/30 17:17
-	8	add\$3 near10 received with email\$1	USPAT	2004/04/30 17:22
-	357	add\$3 near10 (email\$1 or message\$1)near10 (source or sender)	USPAT	2004/04/30 17:23
-	1	add\$3 near10 (arrived or received) near10(email\$1 or message\$1)near10 (source or sender).ab.	USPAT	2004/04/30 17:24
-	51	add\$3 near10 (arrived or received) near10(email\$1 or message\$1)near10 (source or sender)	USPAT	2004/04/30 18:26

-	4	("5093918"   "5377354"   "5619648"   "5826022").PN.	USPAT	2004/04/30
-	36153	without with bind\$3	USPAT	17:30
-	1	without with bind\$3 with address\$2 with socket	USPAT	2004/04/30
-	67	without with bind\$3 with socket	USPAT	18:27
-	67	without with bind\$3 with socket	USPAT	2004/04/30
-	4	without with bind\$3 with socket.ab.	USPAT	18:28
-	52	without with bind\$3 near10 address\$2	USPAT	2004/04/30
-	1	without with bind\$3 near10 address\$2 near10 socket	USPAT	18:28
-	38	without with bind\$3 near10 socket	USPAT	2004/04/30
-	0	"not" with bind\$3 near10 socket	USPAT	18:29
-	0	"not" with bind\$3 near10 address\$2	USPAT	2004/04/30
-	1442	bind\$3 near10 address\$2	USPAT	18:30
-	53	bind\$3 near10 address\$2 near10 socket	USPAT	2004/04/30
-	1	without near10 bind\$3 near10 address\$2 near10 socket	USPAT	18:31
-	53	bind\$3 near10 address\$2 near10 socket	USPAT	2004/04/30
-	32867	without near15 bind\$3	USPAT	18:31
-	1	without near15 bind\$3 near10 address\$2 near10 socket	USPAT	2004/04/30
-	50	without near15 bind\$3 near10 address\$2	USPAT	18:33
-	1	sendmail.ab.	USPAT	2004/04/30
-	1	sendmail\$2.ab.	USPAT	18:34
-	0	sendmail\$1.ti.	USPAT	2004/04/30
-	15	sendmail\$1 and add\$3 near15 (email\$1 or message\$1) near15 (receive\$2 or sent or source or sender)	USPAT	18:35
-	140	sendmail\$1	USPAT	2004/04/30
-	0	6658454.pn. and header	USPAT	18:36
-	1	6658454.pn. and header\$1	USPAT	2004/04/30
-	6139	header with (sender or source)	USPAT	18:47
-	0	recevied with header with (sender or source)	USPAT	2004/04/30
-	86	adding with header with (sender or source)	USPAT	18:47
-	0	email near10 adding with header with (sender or source)	USPAT	2004/04/30
-	23	receiv\$3 with adding with header with (sender or source)	USPAT	18:48
-	4	receiver with adding with header with (sender or source)	USPAT	2004/04/30
-	1	6415329.pn. and remote	USPAT	18:49
-	22650	remote with user	USPAT	2004/04/30
-	31	remote with user and defined with user near10 creat\$3 with (message\$1 or email\$1)	USPAT	18:50
-	659	remote with user and defined with user and creat\$3 with (message\$1 or email\$1)	USPAT	2004/04/30

-	23	remote with user and defined with user and creat\$3 with (message\$1 or email\$1).ab.	USPAT	2004/05/03 06:14
-	1	6415329.pn. and message\$1	USPAT	2004/05/03 06:34
-	110	remote with user with send with message	USPAT	2004/05/03 06:34
-	1	remote with user with send with message and remote with user with access\$3 near10 defined with user	USPAT	2004/05/03 06:35
-	1	remote with user with send with message and remote with user with access\$3 near10 defined with user\$1	USPAT	2004/05/03 06:43
-	21	remote with user with send with message and user with receipt\$4	USPAT	2004/05/03 06:43
-	2	remote with user with send with message and user with receipt\$4 and remote with user near10 author\$6	USPAT	2004/05/03 06:44
-	21	remote with user with send with message and user with receipt\$4 and remote with user	USPAT	2004/05/03 06:52
-	1	remote with user with send with email\$1 and user with receipt\$4 and remote with user	USPAT	2004/05/03 06:58
-	1	6717513.pn. and remote with user	USPAT	2004/05/03 07:00
-	150268	6717513.pn. and password\$1 or id\$1	USPAT	2004/05/03 07:00
-	1	6717513.pn. and (password\$1 or id\$1)	USPAT	2004/05/03 07:01
-	1	6717513.pn. and (access\$5 or authori\$6)	USPAT	2004/05/03 07:53
-	1	6717513.pn. and log\$4	USPAT	2004/05/03 07:06
-	675	remote with user with authoriz\$5	USPAT	2004/05/03 07:06
-	10	remote with user with authoriz\$5 and (message\$1 or email\$1) with (send\$3 or sent) with user with receipt\$4	USPAT	2004/05/03 07:07
-	8	remote with user with authoriz\$5 and (message\$1 or email\$1) with (send\$3 or sent) with user with receipt\$4 and server	USPAT	2004/05/03 07:08
-	0	5867661.pn. and socket with gateway	USPAT	2004/05/03 07:53
-	1	5867661.pn. and socket with server	USPAT	2004/05/03 07:54
-	0	5867661.pn. and socket with source with address with server	USPAT	2004/05/03 07:54
-	6	socket with source with address with (server or gateway)	USPAT	2004/05/03 07:55
-	14	"6415329"	USPAT	2004/10/18 14:47
-	1	"6415329".pn.	USPAT	2004/10/18 14:47